

Local Hazard Mitigation Plan ANNEX

Town of Portola Valley

Introduction

The Town of Portola Valley is a small, rural residential municipality located in San Mateo County, California. The Town has a population of 4,462 people, based on the 2000 census¹. As indicated on the Association of Bay Area Government's (ABAG) website², approximately 87% (2,809 acres) of the land use in Town is residential. The Town's 2004-05 General Fund budget is approximately \$3.5 million. The Town employs 11 full-time and two part-time employees, contracts for police services with the County of San Mateo Sheriff's Office, and the Town is within and receives fire services from the Woodside Fire Protection District.

The Planning Process

The Town has a Safety Element to its General Plan, last updated in 1998, that includes a discussion of fire, earthquake, flooding, and landslide hazards. In addition, the Town routinely enforces the requirements of the California Environmental Quality Act (CEQA) requirements (which, since 1988, have required mitigation for identified natural hazards). The Town's effort has focused on building on these pre-existing programs and identifying gaps that may lead to disaster vulnerabilities, in order to work on ways to address these risks through mitigation.

Many of the activities conducted by the Town were fed into the planning process for the multi-jurisdictional plan. The Town participated in ABAG's general "kick-off" meeting. In addition, the Town has provided oral comments on the multi-jurisdictional plan. Finally, the Town provided information on facilities that are viewed as "critical" to ABAG.

Town staff met on two occasions to identify and prioritize mitigation strategies appropriate for the Town. Staff involved in this meetings included the Town Administrator, Planning Manager, Building Official, Assistant Town Administrator and Public Works Director. At the first meeting, the general priorities and appropriate Town departments were identified. The second meeting involved reviewing and validating the Mitigation Activities Priorities matrix. The Town also submitted the draft Annex to the Town Planner, Town Geologist (both contract positions) and the Woodside Fire Protection District for comment. The Town provided the opportunity for the public to comment on the Draft Mitigation Strategies selected by Town staff at the Town Council meeting on May 11, 2005. The resolution adopting the plan and strategies was on the Town Council's July 13, 2005 agenda. In future, when the Safety Element of the Town's General Plan is reviewed and revised, the mitigation strategies will be reviewed for inclusion as an implementation appendix to the Safety Element.

¹ For complete Census information on this town, see <http://www.bayareacensus.ca.gov/>.

² <http://www.abag.ca.gov/cgi-bin/dbhazard/dbh3.pl>

Hazard and Risk Assessment

The ABAG multi-jurisdictional Local Hazard Mitigation Plan, to which this is an Annex, lists nine hazards that impact the Bay Area, five related to earthquakes (faulting, shaking, earthquake-induced landslides, liquefaction, and tsunamis) and four related to weather (flooding, landslides, wildfires, and drought). These hazards also impact this community, except for tsunamis. Tsunamis are not a hazard in the Town because it is not adjacent to the Pacific Ocean nor San Francisco Bay.

The Town has undertaken a number of general hazard mapping activities including:

1. Special Building Setback Lines – EF: Covers the portion of the Town along the San Andreas Fault Zone and shows special building setbacks that are required along the mapped earthquake fault traces.
2. Flood Hazard Boundary Maps: Cover the entire Town and show the flood hazard areas mapped by the National Flood Insurance Program.
3. Movement Potential of Undisturbed Ground Map: Controls the density and location of developments and is of sufficient detail to show individual properties.

These maps are generally more detailed and more current than those shown on the ABAG website at <http://quake.abag.ca.gov/mitigation/>.

The Town has undertaken a deliberate program to use geologic information in planning and regulating land use. Portola Valley was one of the first communities in the U.S. to use slope-density regulations, which reduce the intensity of land use as slopes increase. The Town has received national attention for its work in reducing the potential for geologic hazards, and, in 2003, received an award “For Leadership, Innovation and Outstanding Progress in Earthquake Risk Reduction” from the Northern California Chapter of the Earthquake Engineering Research Institute. For additions to an existing residence, new residential construction or other development that would require substantial grading, a geotechnical (soils) investigation is required. A more detailed geologic evaluation may be required if site conditions warrant. If a geologic evaluation is required, the applicant must hire a geotechnical consultant to review and approve the geotechnical aspects of the plan. The geotechnical consultant submits a letter to the Town describing any modifications made to the development plan; this letter is reviewed and approved by the Town Geologist before site development and/or building permits are issued.

The Town, in collaboration with the Woodside Fire Protection District, has undertaken a multi-pronged approach to reduce the risk posed by wildfire resulting from the presence of significant wildland-urban interface threat areas. Each year the Town performs a systematic vegetation management and tree-trimming program along road rights of way. The Town also ensures that fire road access is cleared of obstructions, brush and dry vegetation. On September 8, 2004, the Town Council adopted Ordinance 2004-357, requiring Class “A” roofing on all new construction projects and construction projects of 120 square feet or greater, consisting of removal and replacement of 50% or

more of the roof structure. Recently, the Fire District, in coordination with the Town, has implemented a Neighborhood Chipping Program, which provides residential curbside chipping and removal of brush and tree trimmings. The Fire District and Town strongly promote the establishment of defensible space on private and public property through educational materials, site visits and consultation with property owners. More information about the Woodside Fire Protection District can be found at www.woodsidefire.org.

Information on disasters declared in San Mateo County is at <http://quake.abag.ca.gov/mitigation/disaster-history.html>.

The Town examined the hazard exposure of Town residential land based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. According to this data source, of the 2,809 acres of residential land in the Town,

- ◆ Flooding - 80 acres are in the 100-year flood plain;
- ◆ Dam Inundation - No acreage is subject to dam inundation;
- ◆ Landsliding - 803 acres are in areas of existing landslides;
- ◆ Earthquake-induced landslides – the California Geological Survey has not completed mapping of this hazard in the Town. However, the hazard is viewed as similar to the areas of storm-triggered landsliding.
- ◆ Earthquake-triggered liquefaction - 279 acres are in areas of moderate, high, or very high liquefaction susceptibility;
- ◆ Earthquake ground shaking - 348 acres are in the highest category of shaking potential, in large part because the San Andreas fault runs through the western portion of the Town;
- ◆ Earthquake faulting – The San Andreas fault runs through the Town, resulting in 469 urban acres being in the Alquist-Priolo Earthquake Fault Study Zones.
- ◆ Wildfires - 574 acres are subject to high or very high wildfire threat (because of the rural nature of the Town), and 2,565 acres are in wildland-urban interface threat areas.
- ◆ Drought – All of the Town is subject to this hazard.

The Town also examined the hazard exposure of infrastructure based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. According to this data source, of the approximately 37 miles of roadway in the Town,

- ◆ Flooding - Less than 1% of roadway miles are in the 100-year flood plain;
- ◆ Dam Inundation - No roadway mileage is in an area subject to dam inundation;
- ◆ Landsliding - Approximately 6 miles of roadway are in areas of existing landslides;
- ◆ Earthquake-induced landslides – the California Geological Survey has not completed mapping of this hazard in the Town. However, the hazard is viewed as similar to the areas of storm-triggered landsliding.
- ◆ Earthquake-triggered liquefaction - Approximately 3 miles of roadway are in areas of moderate, high, or very high liquefaction susceptibility;

- ◆ Earthquake ground shaking - Approximately 7 miles of roadway are in the highest category of shaking potential;
- ◆ Earthquake faulting – The San Andreas fault runs through the Town, resulting in 13 miles of roadway in the Alquist-Priolo Earthquake Fault Study Zones.
- ◆ Wildfires - Approximately 6 miles of roadway are subject to high or very high wildfire threat, while all roadway miles are in wildland-urban interface threat areas.
- ◆ Drought – Drought is not a hazard for roadways.

Finally, the Town examined the hazard exposure of critical health care facilities, schools, and town-owned buildings based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickcrit.html>. According to this data source, of the critical facilities in the Town,

- ◆ Flooding - No critical health care facilities, schools, or town-owned facilities are in either the 100-year flood plain or in other flood-prone areas;
- ◆ Dam Inundation - No critical health care facilities, schools, or town-owned facilities are in an area subject to dam inundation;
- ◆ Landsliding - No critical health care facilities, schools, or town-owned facilities are in areas of existing landslides;
- ◆ Earthquake-induced landslides – the California Geological Survey has not completed mapping of this hazard in the Town. However, the hazard is viewed as similar to the areas of storm-triggered landsliding.
- ◆ Earthquake-triggered liquefaction - One long-term care facility and one elementary school are in areas of high liquefaction susceptibility;
- ◆ Earthquake ground shaking - One long-term care facility, two schools, the fire station and the Town Center complex are in the highest category of earthquake shaking potential;
- ◆ Earthquake faulting – Several Town Center buildings lie within the rupture zone of the San Andreas Fault.
- ◆ Wildfires - One long-term care facility, three schools and the Town Center complex are in wildland-urban interface threat areas.
- ◆ Drought – Drought will not affect Town buildings directly. In addition, the Town does not operate a water-supply distribution system.

The Town has only a small amount of acreage (the largest being 86 residential and 13 forested acres) located in flood-prone areas. However, there is only one repetitive flood loss property with two claims totaling \$478,997 in the Town based on the information at <http://quake.abag.ca.gov/mitigation/pickflood.html>.

The Town plans to work with ABAG to develop specific information about the kind and level of damage to buildings, infrastructure, and critical facilities which might result from any of the hazards previously noted. The ABAG Annex states that ABAG will be doing this work in 2005 through early 2006.

Drought, though a potential problem in the Town, is not fully assessed. The Town will work with ABAG and various water supply agencies on this issue.

As these impacts are not fully developed, the Town has reviewed the hazards identified and ranked the hazards based on past disasters and expected future impacts. The conclusion is that earthquakes (particularly shaking, fault surface rupture, and liquefaction), wildfire, and landslides pose a more significant risk for potential loss than flooding, dam inundation, and tsunamis.

Mitigation Activities and Priorities

As a participant in the ABAG multi-jurisdictional planning process, Town staff helped in the development and review of the comprehensive list of mitigation strategies in the overall multi-jurisdictional plan. The list was discussed at a meeting of the Town Administrator, Building Official, Public Works Director, Planning Manager, and Assistant Town Administrator on January 14, 2005. At the meeting, all of the mitigation strategies were reviewed. The tentative decision on priority was made based on a variety of criteria, not simply on an economic cost-benefit analysis. These criteria include technical and administrative feasibility, political acceptability, social appropriateness, legality, economic soundness, and lack of harm to the environment or our heritage.

Over time, we are committed to developing better hazard and risk information to use in making those trade-offs. We are not trying to create a disaster-proof region, but a disaster-resistant one. A number of strategies are already included in Town programs.

These draft priorities were submitted to the Town Administrator for review. The draft priorities were then provided to the Town Council on May 11, 2005. The public was provided with an opportunity to comment on the draft priorities. The final strategies (as shown in the attached Table) will be reviewed for inclusion as an *Implementation Appendix* to the Town's *Safety Element*.

In addition, the Town examined the hazard exposure information related to Town-owned critical facilities supplied by ABAG. The Town has determined that the combination of construction type, age and shaking exposure to existing Town Center buildings are significant. Therefore, the Town is currently undertaking a plan to construct new buildings at another location on the Town Center property. This new location has been shown, through extensive geologic investigation, to be appropriate for the siting of new buildings.

The Plan Update Process

The Assistant Town Administrator will ensure that monitoring of this Annex will occur. The plan will be monitored on an on-going basis. However, the major disasters affecting our community, legal changes, notices from ABAG as the lead agency in this process, and other triggers will be used. Finally, the Annex will be a discussion item on the agenda of the meeting of Town department heads at least once a year in April. At that meeting, the department heads will focus on evaluating the Annex in light of technological and political changes during the past year or other significant events. This group will be responsible for determining if the plan should be updated.

The Town of Portola Valley is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The Assistant Town Administrator will contact ABAG four years after this plan is approved to ensure that ABAG plans to undertake the plan update process. If so, the Town again plans to participate in the multi-jurisdictional plan. If ABAG is unwilling or unable to act as the lead agency in the multi-jurisdictional effort, other agencies will be contacted, including the County's Office of Emergency Services. Jurisdictions will then work cooperatively to identify another regional forum for developing a multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated, and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the Town will provide the opportunity for the public to comment on the updates. A public notice will be posted prior to the meeting to announce the comment period and meeting logistics.